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ANNUAL REPORT
OF THE
EASTERN ROCKIES FOREST
CONSERVATION BOARD

ONE WEEK LOAN
FOR THE
FISCAL YEAR
1959 - 60

GENERAL SCIENCES

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CALGARY, ALBERTA

MARCH 31st, 1960

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ANNUAL REPORT

of the

EASTERN ROCKIES FOREST CONSERVATION BOARD

for the

FISCAL YEAR

1959-60

Calgary, Alberta.

March 31st, 1960.

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EASTERN ROCKIES FOREST CONSERVATION BOARD

CALGARY, Alberta,
August 31st, 1960.

The Honourable Norman Willmore,
Minister of Lands and Forests,
EDMONTON, Alberta.

Sir:

I have the honour to submit herewith the Annual Report of the Eastern Rockies Forest Conservation Board for the fiscal period April 1st, 1959 - March 31st, 1960, pursuant to the provisions of the Eastern Rocky Mountain Forest Conservation Act of 1947. I am,

Your obedient servant,

J. R. H. Hall,
Chairman.

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EASTERN ROCKIES FOREST CONSERVATION BOARD

CALGARY, Alberta,
August 31st, 1960.

The Honourable Alvin Hamilton,
Minister of Northern Affairs
and National Resources,
OTTAWA, Ontario.

Sir:

I have the honour to submit herewith the
Annual Report of the Eastern Rockies Forest Conservation
Board for the fiscal period April 1st, 1959 - March 31st,
1960, pursuant to the provisions of the Eastern Rocky
Mountain Forest Conservation Act of 1947. I am,

Your obedient servant,

J. R. H. Hall,
Chairman.

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* * * *

EASTERN ROCKIES FOREST CONSERVATION BOARD

Board Members

Chairman and Provincial Member	J. R. H. Hall
Provincial Member	A. T. Baker, B.A.
Federal Member	G. Tunstell, B.Sc.F.

* * * *

Principal Administrative Officers

Administrative Officer	S. R. Hughes
Secretary	J. M. Marshall
Chief Forester	W. R. Hanson
Protection Planning Officer	P. L. Brooks
Superintendent Crowsnest Forest	J. F. Hogan
Superintendent Bow River Forest	F. V. Keats
Superintendent Clearwater Forest	G. A. Longworth

* * * *

INTRODUCTION AND LEGISLATION

MEETINGS OF THE BOARD

The Board met six times in Calgary during the year under review.

Minutes of the meetings were recorded and copies submitted to the Minister of the Department of Northern Affairs and National Resources of Canada and the Minister of the Department of Lands and Forests of the Province of Alberta.

LEGISLATION

No amendments were enacted affecting the existing agreement

between the Government of Canada and the Government of the Province of Alberta during the year under review.

APPOINTMENTS - BOARD MEMBERSHIP

Mr. H. G. Jensen of Edmonton, Alberta, was appointed a member and Acting Chairman of the Board

effective April 8th, 1959.

Mr. George Tunstell of Ottawa, Ontario, was appointed to represent the Government of Canada on the Board effective April 1st, 1959, replacing Major-General Howard Kennedy whose resignation as a representative of the Federal government and Chairman of the Board became effective March 31st, 1959.

Mr. J. R. H. Hall of Edmonton, Alberta, a former official of the Department of Lands and Forests, was appointed as a member and chairman of the Board with effect from January 1st, 1960, replacing Mr. H. G. Jensen who retired from the Board on January 1st.

ADMINISTRATION

At the request of the Province, the Board assumed responsibility

on April 1st, 1955, for administration as well as planning

on the Conservation Area. Late in 1958 the Province notified the Board that effective April 1st, 1959, it was prepared to carry out the programme of work as approved by the Board but that, for the time being, no changes in their staff or organization were contemplated. In accordance with this the Administrative Office of the Board in Calgary carried on with only minor changes.

BOARD PROPERTY
AND EQUIPMENT

The Agreement between Canada
and the Province of Alberta by

Section 20(b) provides that, "upon termination of this Agreement all other property acquired by the Board shall belong to the Province."

Section 6(2)(b) of this Agreement provides that the Province shall carry out the Board's programme for maintenance and current expenditures for any year upon receiving the programme for that year.

As equipment acquired by the Board was necessary to carry out the programme it was sold to the Province on the basis of book value less depreciation as of March 31st, 1959.

Acknowledgment by the Province of its indebtedness to the Board in the amount of \$173,496.38 was received from the Minister of Lands and Forests in a communication dated June 17th, 1959.

An audited copy of the equipment inventory, together with details of the transfer, were duly forwarded to the Minister of Northern Affairs and National Resources under date of June 23rd, 1959.

By arrangement at the Ministerial level the resultant liability incurred by the Province will be

carried as a "Contingent Liability" to be liquidated at the expiration of the Agreement.

As new equipment is required to service the Rocky Mountains Forest Reserve it will be bought and paid for by the Province, who will take advantage of the trade-in allowance or recoverable value of obsolete equipment.

PERSONNEL

The permanent staff of the Rocky Mountains Forest Reserve totalled eighty-four persons during the year under review. Seasonal employees, comprising lookoutmen, fire-suppression crews, student assistants and road crew numbered forty-eight persons. This was substantially the same personnel establishment as last year.

Mr. R. G. Steele, formerly Superintendent, Clearwater Forest, was promoted to Senior Superintendent, Forest Surveys Branch in Edmonton, effective July 1st, 1959.

Mr. G. A. Longworth, formerly Assistant Superintendent, Bow River Forest, was promoted to Superintendent, Clearwater Forest.

Assistant Superintendent F. E. Sutherland was transferred from the Crowsnest Forest to the Bow River Forest. The vacancy created in the Crowsnest Forest was filled by Mr. B. F. Simpson, a forester formerly attached to the Clearwater Forest.

Mr. F. E. Sutherland was subsequently transferred to the Forest Management Branch in Edmonton and Mr. I. B. Frew, Headquarters Ranger, Bow River Forest, was promoted to Assistant Superintendent of that Forest.

A summary showing the distribution of personnel is appended hereto. (Appendix A)

The typical functions of the field and administrative personnel remained substantially the same as in the previous year. No major changes took place in the general conditions of employment in the service.

Field personnel continue to enjoy a high standard of living and no problems have been evident in respect to their living conditions.

FOREST PROTECTION

FOREST FIRE PROTECTION

In the Crowsnest and Bow River Forests rain and snow was general throughout May and June keeping the fire danger to nil. In the Clearwater Forest however, an extreme fire danger developed during the month of May. In July dry hot weather increased the fire rating index in the Crowsnest Forest to high and extreme. It was necessary to close that forest from August 4th to 13th because of the fire danger. Scattered showers were common in the Clearwater and Bow River forests during the summer, keeping the fire danger low. Heavy rains occurred throughout the Rocky Mountains Forest Reserve in mid August and wet weather ended the hazard for the season.

Air patrols were made over lightning areas in the Clearwater Forest. Three standby crews were hired for immediate fire action within the Forest Reserve.

Twelve weather stations supplied daily weather reports throughout the fire season. In addition

ten lookout stations provided additional fire weather information to forest headquarters. The Federal Department of Transport supplied fire weather forecasts daily. During the year thirty-four fires occurred, nineteen of these were within the Forest Reserve and fifteen were on adjacent lands. The following table shows the fire distribution by forest areas, causes and sizes.

	<u>Inside Reserve</u>	<u>Outside Reserve</u>	<u>Total</u>
Clearwater Forest	-	5	5
Bow River Forest	17	7	24
Crowsnest Forest	2	3	5
	<hr/>	<hr/>	<hr/>
	19	15	34
	<hr/>	<hr/>	<hr/>

Fires by Causes

<u>Cause</u>	<u>Inside Forest Reserve</u>	<u>Adjacent to Forest Reserve</u>	<u>Total Fires</u>	<u>Total %</u>
Campers	12	3	15	45.0
Lightning	2	3	5	14.4
Industrial	2	3	5	14.4
Smokers	2	2	4	11.7
Railway	-	2	2	5.8
Settlers	-	1	1	2.9
Unclassified	-	1	1	2.9
Unknown	1	-	1	2.9
	<hr/>	<hr/>	<hr/>	
	19	15	34	100.0
	<hr/>	<hr/>	<hr/>	

Fires by Classification

<u>Classification</u>	<u>Number</u>	<u>Per Cent</u>
A (Less than 1/4 acre)	33	97
B (1/4 acre to 10 acres)	-	-
C (10 acres to 100 acres)	1	3
	<hr/> 34	<hr/> 100

Only one fire exceeded one-quarter acre in size. This lightning fire which occurred in the Clear-water Forest reached 89 1/2 acres in size before it was extinguished. The fire destroyed 52,000 f.b.m. of merchantable spruce and 792 cords of young growth, and the suppression cost was \$987.00.

Forest conservation and fire prevention publicity was increased through the media of radio, television and the press.

A series of interviews dealing with many forestry subjects were broadcast by one radio station.

A number of films were shown and talks given on forest conservation and fire prevention to various schools, service clubs, and conservation organizations in the City of Calgary and vicinity. The Canadian Forestry Association once again presented their excellent conservation programme to the public throughout southern Alberta.

BIOLOGICAL PROTECTION

Personnel of the Federal Forest Biology Division, Department of Agriculture, have continued to keep the Forest Reserve under constant observation from their laboratory in Calgary.

A small outbreak of the Douglas fir bark beetle was reported from the Porcupine Hills in the summer of 1959. The outbreak occurred in a small stand of mature Douglas fir adjacent to a logged-over area. Using the information on volumes obtained by the Alberta Forest Service it was estimated that the volume of timber destroyed by the bark beetle was 124,500 f.b.m., or 10 per cent of the total volume in the stand. On the recommendation of the Board the infested timber was sold with conditions of sale prescribed so as to avoid further spread of the outbreak.

There were no other significant changes in the forest insect population on the area. No changes in forest pathological diseases were reported.

The Board is very appreciative of the watchful eyes of the Forest Biology Division in this conservation area. Their presence and interest in the area assures that all outbreaks of insects or diseases will be quickly detected and reported.

Reports on insect conditions and forest diseases in the Eastern Rockies Forest Conservation Area as prepared by the Research Branch, Forest Biology Laboratory, are appended hereto. (Appendices B and C)

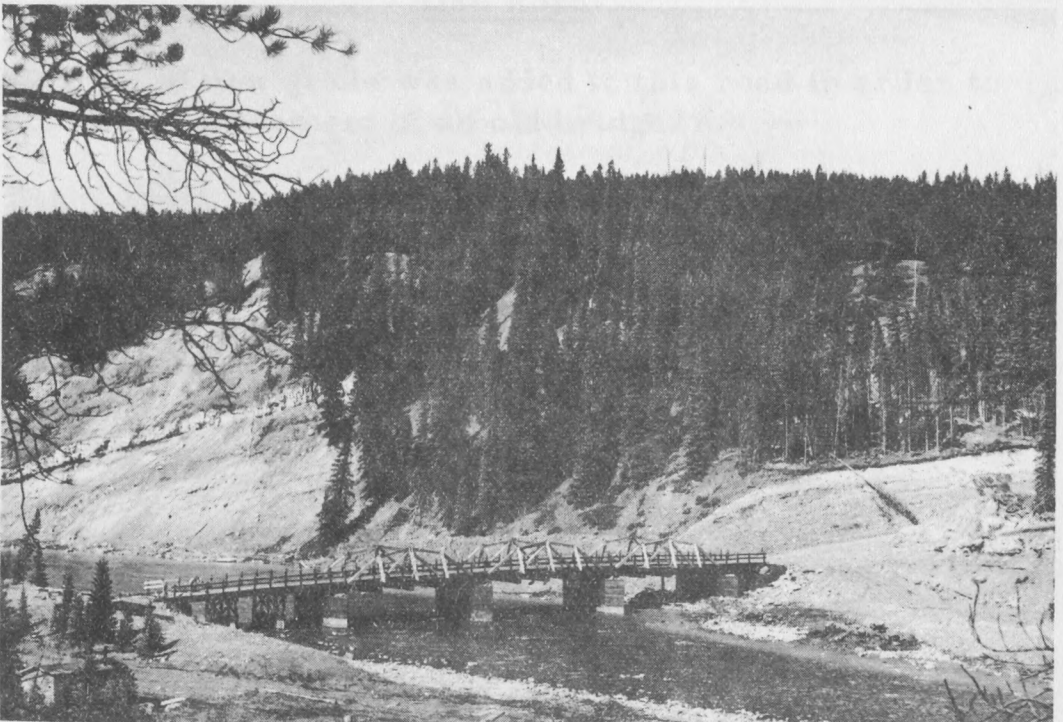
NEW CONSTRUCTION

BRIDGES

Brazeau Bridge

A pony truss bridge 240 feet in length and 20 feet in width was built across the Brazeau River on the new Brazeau Road by the Forestry road crew. The pile driven structure was constructed with British Columbia and Alberta Douglas fir. Three glue laminated cross-members were used on each of three 48-foot spans. Load standard is H20-S16. Total cost of the structure was \$31,083.00.

The Brazeau Road, which is still under construction, will link Nordegg with Hinton and Edson when completed.



Brazeau Bridge

Brown Creek Bridge

A queen truss bridge was constructed across Brown Creek on the Brazeau Road. The bridge is 36 feet long and 20 feet wide and built to withstand 40-ton loading.

Prairie Creek Bridge

One 34-foot stringer bridge was installed at Prairie Creek to give access to the new ranger station in that area.

ROADS

Sharples Creek Access Road

Two miles of new grade was constructed and gravelled on this road which completed the project within the Forest Reserve.

Gap Road

One mile of new grade was added to this road in order to avoid the replacement of an old bridge.

David Thompson Highway

The construction of this new road is under the jurisdiction of the Department of Highways. Clearing of right-of-way has been completed from Nordegg to the Cline River, a distance of some 28 miles.

Oil Company Roads

In addition to roads constructed by the government, 47 miles of grade was built by various oil companies to well sites within the Rocky Mountains Forest Reserve.

AIRSTRIPS

Three airstrips suitable for use by the Forest Service aircraft (Helio-Courier)

were built in the Clearwater Forest during the year. The strips are located at the South Ram River, Upper Saskatchewan Ranger Station and in the vicinity of the new Brazeau River Bridge.

BUILDINGS

Prairie Creek Ranger Station

A three-bedroom house with office, double garage-storehouse, barn and a light-plant house were completed at the new Prairie Creek Ranger Station. Landscaping of the grounds is still required.

Shunda Storehouse-Garage

An extension was added to this building to give more storage space.

POWER LINES

Line power was installed by Farm Electric Services to the Ghost and

Clearwater Ranger Stations - a total distance of 15 miles. Eleven ranger stations have now been supplied with line power and seven still utilize lighting plants for power.

CAMPGROUNDS

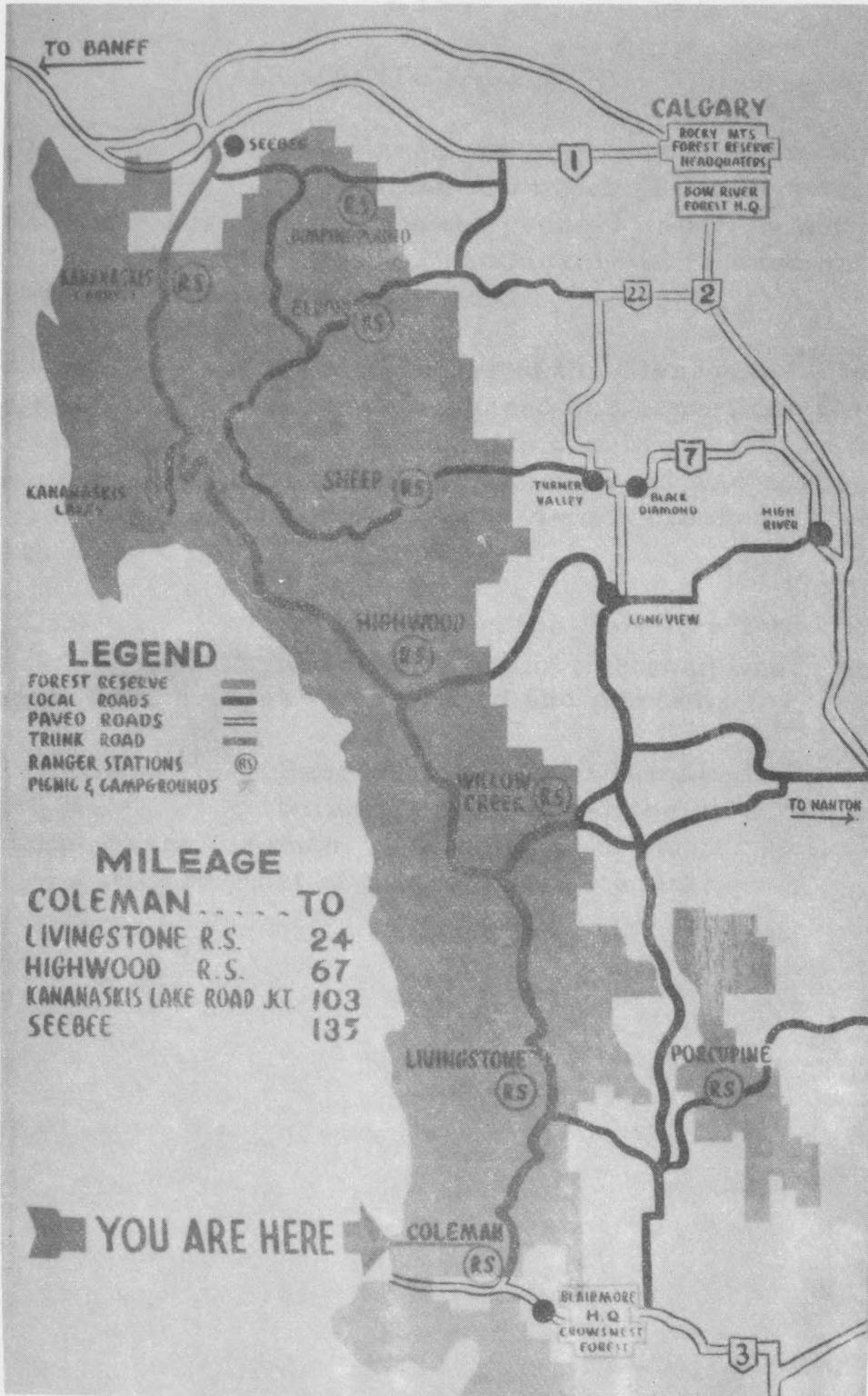
Campground extension and new development was carried out during the year.

A total of 120 tables, 28 outdoor fireplaces and 20 outhouses were constructed.

FOREST SIGNS

The permanent sign painter located at Coleman continued to prepare signs for

the Forest Reserve. Directional signs, forest protection signs and road mileage signs were painted in green and white and protected with a plastic varnish.



Road Mileage Sign

MAINTENANCE

ROADS Five large patrol graders regularly maintained 355 miles of forestry trunk and access roads. In addition the graders repaired and graded 208 miles of fire truck trails. Bulldozers were used for maintenance of most lookout roads.

Seventy miles of the Clearwater Trunk Road was ditched, the grade reshaped and gravelled, using approximately 200 yards of 3/4-inch crushed gravel to the mile. Eleven miles of the Sheep access road was reshaped and gravelled, using 400 yards of 3/4-inch crushed gravel to each mile.

BRIDGES All bridges on the Forestry Trunk Road were checked and tightened where necessary. Nine bridges were washed and painted.

BUILDINGS Ranger staff spent 581 man-days on building repair under the direction of the maintenance foreman. The painting of ranger station buildings utilized most of this maintenance time.

RECREATION

GENERAL TRAVEL

Since the summer of 1956, when an annual study of public travel in the Forest Reserve was first compiled as an aid to fire control planning, and to evaluate the need for recreational facilities, travel in the Conservation Area has continued to increase year by year as indicated in the following summary.

<u>Year</u>	<u>Forest Users</u>	<u>% Increase</u>
1956-57	138,006	-
1957-58	185,914	34.7
1958-59	189,654	2.0
1959-60	207,368	9.3

Travel in the Forest Reserve continued its upward trend during the fiscal year 1959-60 with a total of 66,822 vehicles carrying 207,368 passengers registering for various purposes. This is an increase of 6,805 vehicles and 17,714 passengers over the preceding year.

The Bow River Forest again attracted the highest percentage of registered travellers with 61.6 per cent of the total, followed by the Crowsnest Forest with 20.3 per cent and the Clearwater Forest with 18.1 per cent.

Travel figures for 1959-60 by forests as compared with the previous year are shown on the next page.

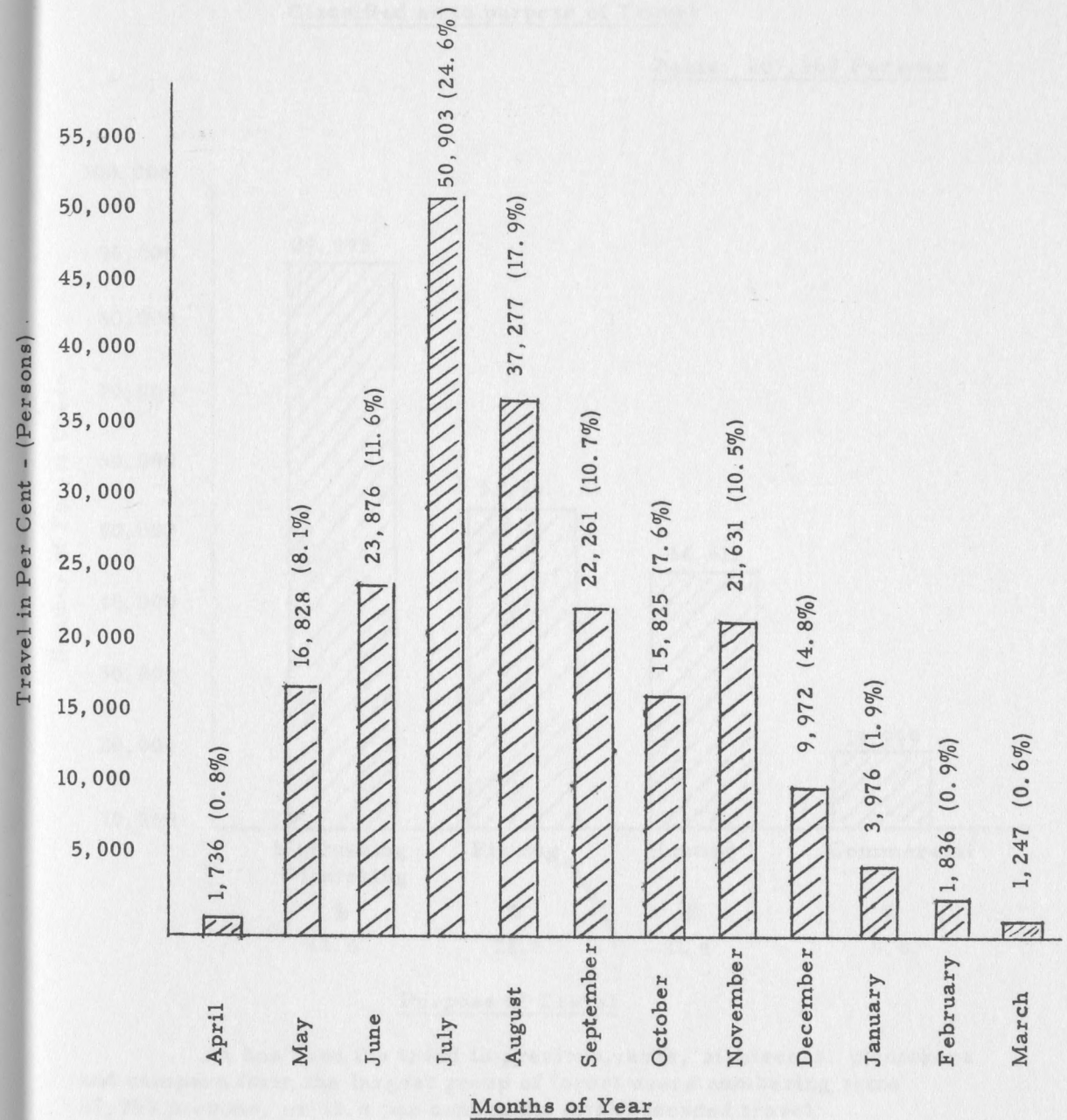
TOTAL NUMBER OF REGISTERED TRAVELLERS
BY FORESTS

	<u>1958-59</u>	<u>1959-60</u>	<u>Increase or Decrease</u>	<u>% Increase or Decrease</u>
Crowsnest Forest	44,755	42,064	2,691-	6.0-
Bow River Forest	116,108	127,844	11,736+	10.1+
Clearwater Forest	28,791	37,460	8,669+	30.1+
Forest Reserve				
Total	189,654	207,368	17,714+	9.3+

Frequency of travel in the Conservation Area by months shows little variation from the previous year as indicated by the following chart, with the peak reached during July and August, which months accounted for 42.5 per cent of the total travel.

Frequency of Travel by Months

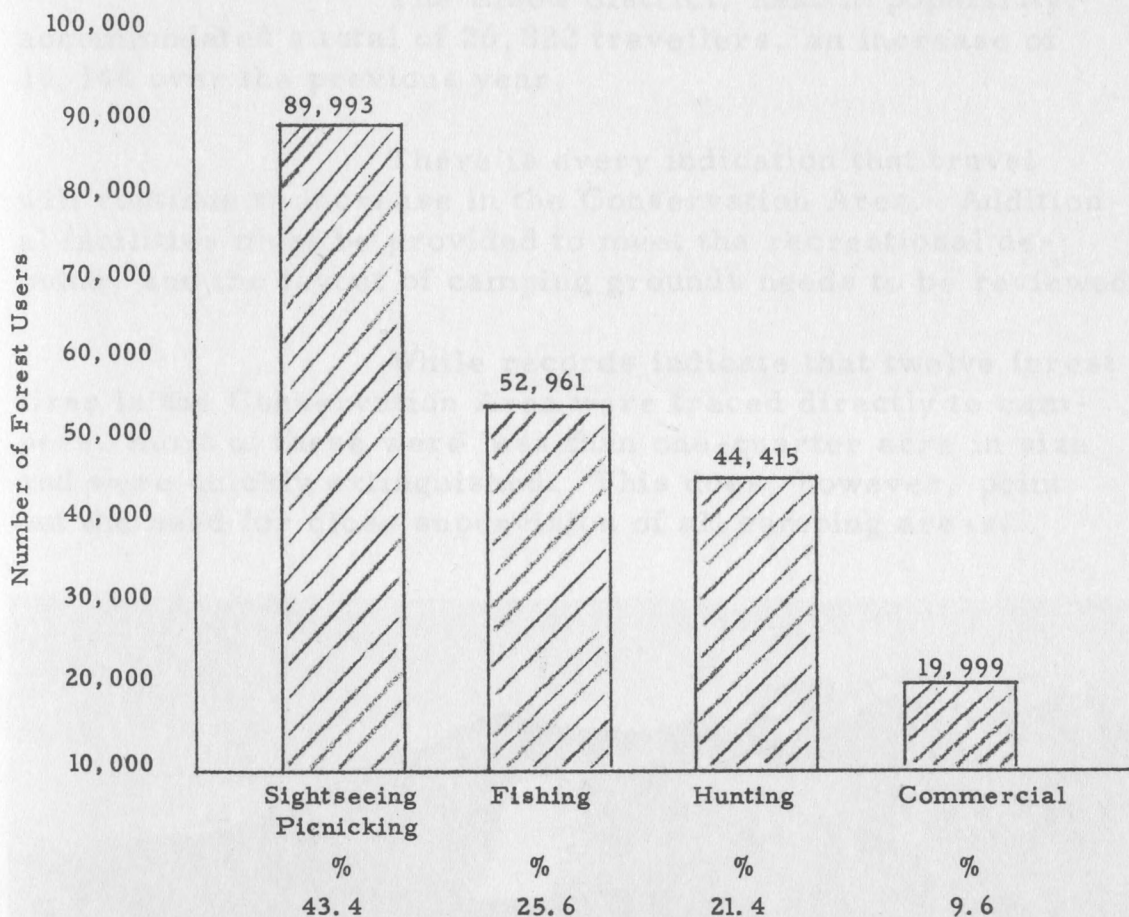
Basis: 207,368 Persons



Number of Forest Users

Classified as to purpose of Travel

Basis: 207,368 Persons



Purpose of Travel

As has been the trend in previous years, sightseers, picnickers and campers form the largest group of forest users numbering some 89,993 persons, or 43.4 per cent of the total recorded travel.

Fishing is next in popularity; registrations indicating that nearly 53,000 persons registered for this purpose. Hunters during the season numbered slightly over 44,000. Commercial travel remained fairly constant, showing an increase of about one per cent over the preceding year.

The highest incidence of travel was once again recorded in the Kananaskis district of the Bow River Forest which accommodated some 35,279 travellers. This is an increase of 4,213 persons over the preceding year.

The Elbow district, next in popularity, accommodated a total of 26,822 travellers, an increase of 10,144 over the previous year.

There is every indication that travel will continue to increase in the Conservation Area. Additional facilities must be provided to meet the recreational demand, and the layout of camping grounds needs to be reviewed.

While records indicate that twelve forest fires in the Conservation Area were traced directly to campers, most of these were less than one-quarter acre in size and were quickly extinguished. This does, however, point out the need for close supervision of all camping areas.



New Type Camp Shelter

UTILIZATION OF RESOURCES

FOREST PRODUCTION Nine timber berths were sold during the year under review with a total volume of 56,510,000 feet board measure. Ninety per cent of the timber was spruce with white pine, Douglas fir and balsam fir making up the remainder.

Overall production from the Forest Reserve was reduced in 1959 although there was an increase in the cutting of dry and green round timber and in pine Christmas trees. There were 115 timber berths active during the year and 469 special or miscellaneous timber permits were issued.

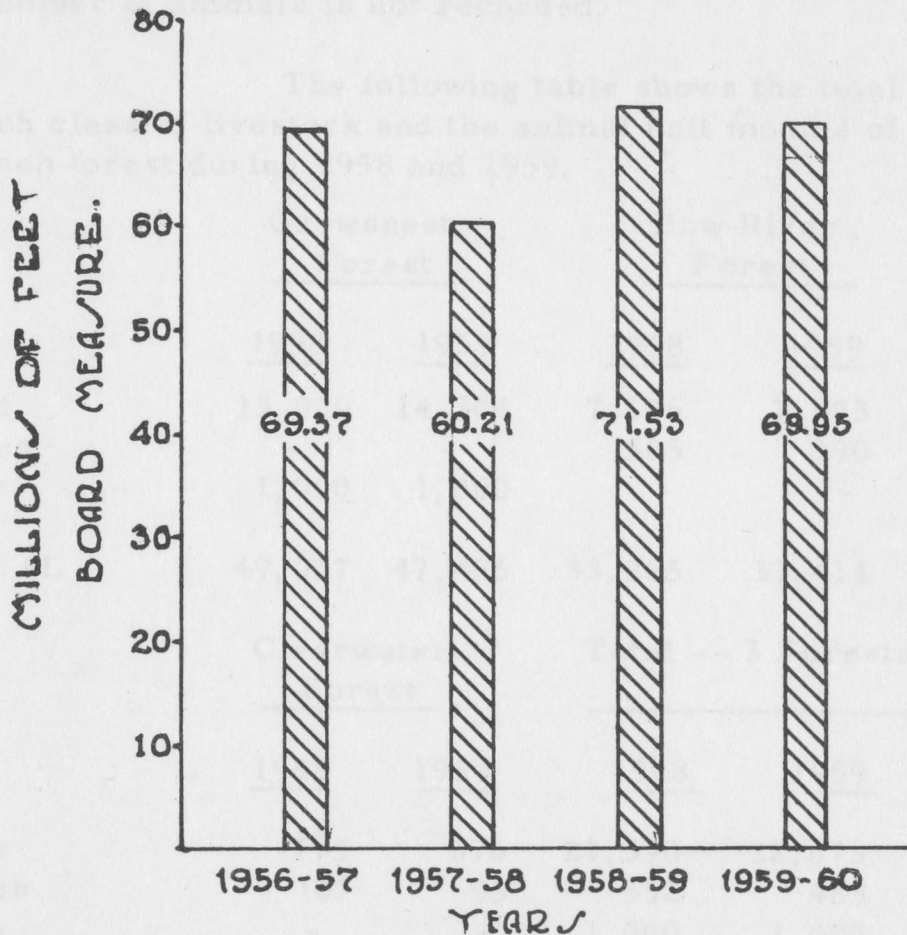
Production of Lumber and Related Products

	<u>1958-59</u>	<u>1959-60</u>
Lumber and ties (million f. b. m.)	68.15	58.92
Round timber, green and dry - (million lineal feet)	2.46	5.61
Pulpwood (cords)	8,529	-
Plywood poplar (cords)	-	8,305
Christmas trees	7,641	15,701

Conversion Factors

One lineal foot round timber = 1.375 f. b. m.
One cord plywood = 400 f. b. m.

ANNUAL PRODUCTION OF LUMBER, TIES,
AND ROUND TIMBER FROM ROCKY
MOUNTAINS FOREST RESERVE.



Conversion Factors

One lineal foot round timber = 1.375 f. b. m.
One cord plywood = 400 f. b. m.

GRAZING

The amount of grazing utilized by domestic livestock from the forest reserve remained about the same as in the previous year. The number of animals permitted increased from 23,542 to 24,158 but, due to shorter seasons, the actual use dropped from 84,912 animal unit months to 81,408. In addition, there are 14 grazing leases for cattle and one for horses still in effect for which the number of animals is not recorded.

The following table shows the total number of each class of livestock and the animal unit months of grazing for each forest during 1958 and 1959.

	<u>Crowsnest Forest</u>		<u>Bow River Forest</u>	
	<u>1958</u>	<u>1959</u>	<u>1958</u>	<u>1959</u>
Cattle	13,009	14,304	7,606	7,693
Horses	-	-	385	390
Sheep	1,000	1,000	-	-
*A. U. M.	49,037	47,456	33,265	31,414

	<u>Clearwater Forest</u>		<u>Total -- 3 Forests</u>	
	<u>1958</u>	<u>1959</u>	<u>1958</u>	<u>1959</u>
Cattle	775	676	21,390	22,673
Horses	167	95	552	485
Sheep	-	-	1,000	1,000
*A. U. M.	2,610	2,638	84,912	81,408

* Animal Unit Months - where an animal unit is the equivalent of a 1000-pound cow with sucking calf at foot.

The above mentioned cattle belonged to 286 permittees living in the foothills near the Forest Reserve.

The permittees comprise 22 livestock associations for purposes of operating their livestock together in a forest allotment.

NATURAL GAS AND MINERAL DEVELOPMENT Geophysical exploration for oil and gas continued in all forest reserve districts during the 1959-60 fiscal year, with most of the activity concentrated in the Clear-water Forest.

The drilling of wells for gas and oil was increased during the year. Of eighteen wells drilling in 1959 seven were completed and eleven are continuing to drill. Natural gas has been located in several places within the Forest Reserve.

COAL DEVELOPMENT In the Vicary Creek area of the Crowsnest Forest one company removed 80,000 tons of coal as a test order for use by Japan.

WATER Since the establishment of the Eastern Rockies Forest Conservation Area water has become much more important to the economy of the Saskatchewan River basin. An increased demand has resulted from a greater acreage under irrigation, increase of population and a need for more hydro-electric power. The irrigable acreage in Alberta now stands at 901,000 and to supply the legal 18 inches would require that 1,802,000 acre-feet be turned into canals.

The completion of the South Saskatchewan dam could, eventually, bring an additional half-million acres under irrigation. The same project will generate about 475,000,000 kilowatt-hours of electrical power.

Another dam, now under construction on the Brazeau River, will make use of its water for the generation of additional power and will also help to control the flow of water in the North Saskatchewan River past the City of Edmonton, where pollution from domestic and industrial waste now reaches serious levels at certain seasons of the year.

Population, especially in the large centres, has increased greatly as indicated by the City of Calgary; the population of which increased from 104,718 in 1948 to 235,428 in 1960. Such developments have greatly increased the demand for water and since most of the reliable flow in the Saskatchewan River comes from the upper watershed, the importance of the Conservation Area as a watershed becomes obvious.

Due to topographic characteristics and the weathering of the rock, the water in the upper watershed is generally of high quality. The water in the lower watershed is of lower quality due to the presence of the lower watershed.

The details of the program to develop the upper watershed of the river for the Conservation Area are as follows:

	Area Completed	Area During	Total Area Completed	Area During
	(Sq. miles)	(Sq. miles)	(Sq. miles)	(Sq. miles)
Survey	10,400	300	10,700	1,300
Mapping	2,400	4,000	6,400	10,000
Interpretation	4,500	4,900	9,400	1,400
Planning	3,500	4,000	7,500	2,400
Other Work and Plans	-	1,500	1,500	10,000
Design and Coding	-	1,400	1,400	10,000
Classification	-	1,300	1,300	10,000
Summary	-	900	900	11,000

FOREST MANAGEMENT

FOREST INVENTORY

During the fiscal year 1959-60 the preparation of a forest inventory for the Rocky Mountains Forest Reserve and the adjacent forest area progressed favorably. The original calculated rate of progress proved to be unreliable for the conditions in the Reserve and it was necessary to extend the date of completion to March 31st, 1961.

Due to photographic contract difficulties and unfavorable weather very little photography was done during the year under review. An area of approximately 1000 square miles in the northwest portion of the Clearwater Forest and a few flights to complete gaps still remain to be done.

The details of progress in the various stages of development of the inventory for the Reserve and the adjacent area are as follows:

	Area Completed to Mar. 31/59 (Sq. miles)	Area Completed During 1959-60 (Sq. miles)	Total Area Completed to Mar. 31/60 (Sq. miles)	Area to be Completed (Sq. miles)
Photography	10,400	300	10,700	1,300
Base Mapping	8,404	4,081	12,485	completed
Photo-interpretation	4,646	4,911	9,557	2,443
Transferring	3,542	6,015	9,557	2,443
Correcting Maps and Photos	-	1,885	1,885	10,115
Numbering and Coding	-	1,421	1,421	10,579
Site & Maturity Classification	-	1,276	1,276	10,724
Planimetering	-	986	986	11,014

Field work was completed in the sub-alpine zone in 1959. Sampling in the Boreal Zone will be done during the summer of 1960 with a crew of six to eight men. Compilation of stand tables has been initiated but will not be ready for application until late in the next fiscal year.

REFORESTATION Reforestation pilot trials were carried out by the Forester-in-Charge and a crew of three student assistants.

Some 35,000 spruce seedlings (2 - 0 and 2 - 1 stock) were planted on various cut-over areas and accurate cost records were maintained. With an experienced crew, planting should be possible at a cost of \$15.00 per acre on the average cut-over area.

One hundred and fifty acres of cut-over and burned and cut-over and scarified land were broadcast seeded during the spring and fall. Mil-acre permanent sample plots were established on all seeded areas in order that development can be noted from year to year.

Two small seedbeds were established at the Clearwater and Red Deer Ranger Stations to supply seedling stock for local use.



New Seedbeds
Clearwater Ranger Station

REGENERATION SURVEY During the past year personnel of the Federal Forestry Branch, Department of Northern Affairs and National Resources, again carried out field work on their project, 'The Status of Regeneration in the Crowsnest Forest'.

The present status of regeneration in the study area was found to be far from satisfactory. Mean stocking to all species of regeneration was only 42% and more than half of the area was less than 40% stocked. Much of the poor stocking is due to the inadequate regeneration in the five to ten years immediately following the logging operation.

Spruce is only half as well stocked as fir, both in regeneration and advanced growth. Lodgepole pine is very poorly represented, forming only 10% of all the regeneration present in the study area.

Studies are currently being conducted to ascertain the causes of regeneration failure in the Crowsnest Forest.

This and other work carried out by the Federal Forestry Branch is greatly appreciated by the Board. It is work carried out on a scientific basis and the results of which can be relied upon.

OPERATING PLANS

The Alberta Forest Service during the past year placed an increased emphasis on the need for operational plans for all

timber berths. Standard forms were developed to aid the timber operator in reporting the complete planning details for his timber holding. The plans which cover all activities from the start of logging to the provisions for regeneration must be approved by the Forest Service before operations commence.

As the Eastern Rockies Forest Conservation Board is concerned with watershed protection as a part of the operating plan it developed a form for use on the Rocky Mountains Forest Reserve which requires operational practices to prevent sedimentation of streams and erosion to the cut-over areas and stream banks.

RANGE MANAGEMENT

GRAZING OPERATIONS

The planning of the grazing operations was intensified during the year. All of the 78 grazing allotments are being used according to a written management plan, although some are only preliminary outlines and others are in need of revisions. During the year ten allotments were re-surveyed, and revised plans including new maps were made up. The proposed programme of revising the range management plans every five years is behind schedule and the objective has now been changed to a revision every eight years.

The regular range inspections are performed by the rangers, but checks were made by staff from the administrative office. The following indicates the condition of the range-watershed as reported.

RANGE CONDITION

Range condition was generally good throughout the three forests. Most of the over-grazing was not severe and was confined to small areas.

UTILIZATION

Some limited areas were found to be overutilized during the current season and extensive areas were found to be underutilized. Less than one-half of one per cent of the useable range was over-utilized during the year, amounting to about 3,350 acres.

Some improvements by way of water development, trails and drift fences have been undertaken but the need for better water supply in the Porcupine Hills and for more access trails in the mountain country is still great.

Broad plans and policy are being developed for grazing as part of the conservation unit plans. Progress was made in this direction during the year for the Oldman Conservation Unit. The section of this plan on grazing was in use during the year to guide the work in range management planning and administration of the grazing resource.

WATERSHED MANAGEMENT

PROTECTION Watershed management on the Conservation Area was mostly in the field of protection. Fire protection is of primary concern and is reported upon elsewhere. Uses of the forest resources, such as lumbering, grazing, mining, and drilling for oil and gas, were regulated so as to protect watershed values.

Lumber operations were inspected, new regulations introduced and more stress was placed upon fulfilling those requirements which had to do with watershed protection. Purchasers of timber berths were required to submit an operational plan and the outline for the required plan included a section on watershed protection. Stress was placed upon roads and the Alberta Forest Service did considerable by way of supervision of location and construction. Both the Board and the Alberta Forest Service made inspections to see that proper measures were taken on abandoned roads, trails and yarding areas to avoid erosion and sedimentation of streams. Several operators were required to cross-ditch and seed the bare soil areas.

Inspection and supervision of grazing were continued. A re-survey of the range land and revision of the management plans gave special consideration to watershed condition resulting from grazing. With one exception watershed condition has improved on the local areas where overgrazing had caused unsatisfactory conditions.

Mining, drilling and seismic exploration were all inspected and checked to avoid damage to watersheds. Seismic contractors were required to leave their lines in satisfactory condition. Oil-and-gas-well sites were inspected and found satisfactory. Although seismic exploration slackened off somewhat, there was still insufficient ranger help to check and supervise the operations adequately.

One coal mine created a siltation problem on Vicary Creek and through consultation with the company remedial measures were taken.

RESTORATION Some restoration of watershed condition was undertaken on range land. By deferred rotational grazing, plant cover was increased and soil stability re-established. One gully control and water-spreading project was added to during the year.

MANAGEMENT The work continued on the development
UNIT PLANS of management plans for the conservation units. A first draft of the plan for the Oldman Conservation Unit (formerly Livingstone Conservation Unit) was prepared and is in use as a guide by the Alberta Forest Service.

RESEARCH Following representations made by the Board to the Federal Ministers of Agriculture and Northern Affairs and National Resources, a conference on watershed research for the Rocky Mountains Forest Reserve was convened in Ottawa on December 2nd, 1959.

Represented at the conference were: The Alberta Research Council, the Eastern Rockies Forest Conservation Board, and the Federal Departments of Agriculture, Transport and Northern Affairs and National Resources.

At this meeting it was concluded that a need existed for research on watershed management problems and a technical advisory committee representing the same agencies as had attended the Ottawa meeting was established in Calgary.

Under its terms of reference the committee was charged with making two reports to the parent group comprising:

- (a) a general appraisal of problems amenable to field research, together with a statement of the fields in which a search of literature is needed. The committee would determine which problems might be tackled in 1960 merely by some change of emphasis in current research operations, and
- (b) recommendations for a more comprehensive continuing programme of watershed research on defined problems in sufficient detail to enable the participating organizations to establish priorities and to give these organizations an appreciation of the extent to which assistance may be requested.

These reports were to be submitted in advance of the Federal budgeting exercises so that funds for work proposed may be available for commencing such work in 1961-62.

At a meeting of the Technical Advisory Committee held in Calgary on February 11th and 12th, 1960, a long-term programme was agreed upon. Some of the studies recommended may require ten or more years to complete, although parts of the studies may be finished sooner. A limited amount of work could be undertaken in 1960.

A report embodying the recommendations of the Technical Advisory Committee was forwarded to the Chairman of the parent group in Ottawa in March for consideration at an early meeting of this group.

FINANCIAL

ACCOUNTING The accounting procedure remained substantially the same as in past years, the Province continuing in its capacity as the Board's purchasing and paying agent except for limited purchases made by the Board and the payment of salaries of personnel employed by the Board who are not civil servants. This group comprises the Secretary, Chief Forester, Draftsman, Technical Officer and one Stenographer, all of whom are stationed at the Administrative headquarters in Calgary.

BANKING A current account is maintained with the Royal Bank of Canada in Calgary, Alberta, from which the Board disburses administrative expenses including salaries of Board personnel (non-civil servants) together with travelling expenses, annuity payments, Hospital-Medical Plan premiums and Income Tax payments applicable to this group.

 An accountable advance of \$5,000.00 is provided by the Province from which to defray the foregoing expenses. This account is reimbursed by the Province monthly on receipt of a statement of expenditure from the Board.

WORKMEN'S The Board's deposit of \$5,000.00 with
COMPENSATION the Alberta Workmen's Compensation Board earned interest amounting to \$190.79 less administrative expense and reserve for rehabilitation and enhanced disabilities of \$51.00, leaving a net credit to Proprietary Equity Account of \$139.79.

 No claims for injuries were incurred by Board personnel (non-civil servants) during the fiscal year under review.

ESTIMATES - Estimates for the Maintenance and Admin-
FISCAL YEAR 1960-61 istration of the Rocky Mountains Forest
Reserve for the fiscal year 1960-61 were
approved by the Legislature of the Province
of Alberta under Appropriation No. 1906 totalling \$849,910.00,
as compared with \$780,740.00 for the fiscal year 1959-60,
an increase of \$69,170.00. (Appendix D)

REVENUE Revenue from surface rights derived by
the Alberta Department of Lands and
Forests from the Rocky Mountains Forest Reserve amounted
to \$554,373.61 for the fiscal year ended March 31st, 1960,
as compared with \$566,550.43 for the previous year, a
decrease of \$12,176.82.

Details of revenues are as follows:

	<u>1958-59</u>	<u>1959-60</u>
Grazing Permits, Taxes and Revenue Permits	\$ 41,680.31	\$ 46,609.41
Hay Permits, Fees, Dues, etc.	54.38	16.50
Miscellaneous Leases	967.58	979.28
Miscellaneous Revenue	6,297.22	6,504.51
Timber Permits	11,600.17	12,620.18
Special Timber Permits	6,397.00	9,492.07
Timber Fees, Rent, etc.	15,439.57	17,948.54
Timber Dues	475,546.77	449,591.31
Administrative Sundry Revenue	8,031.00	9,253.35
Previous Year Refunds (Income)	31.85	5.70
Timber Miscellaneous Revenue	60.00	516.48
Right-of-Entry	444.58	836.28
	<u>\$566,550.43</u>	<u>\$554,373.61</u>

In addition to general revenues, collections
by the Province from road tolls amounted to \$9,525.27 during
the year under review bringing the balance on hand in this
account to \$10,240.56.

Revenue obtained from this source is carried in a Special Trust Fund set up by the Provincial Treasurer as authorized by the Forest Reserves Act, and may be used as required for the construction of new roads or for the maintenance of existing roads within the Forest Reserve.

There were no disbursements from this account during the fiscal year 1959-60.

EXPENDITURE Expenditure for the maintenance and administration of the Conservation Area, including expenses of the Board, provided by the Province of Alberta in accordance with Section 2 (a) (II) of the Memorandum of Agreement between the Government of Canada and the Government of the Province of Alberta, totalled \$769,221.17 for the fiscal year ended March 31st, 1960.

Since the close of the Capital Period at March 31st, 1955, the Government of Canada is not committed to any contribution in respect to capital improvements, maintenance or fire suppression costs on the Rocky Mountains Forest Reserve.

The accompanying certified Statement of Assets and Liabilities, together with subsidiary schedules, reflects in detail the financial operations of the Board and the Province with respect to the maintenance and administration of the Conservation Area. (Appendix E)

AUDIT Expenditures by the Province for the maintenance and administration of the Rocky Mountains Forest Reserve are pre-audited by the Provincial Auditor. Board expenditures, as certified to by the Secretary, are audited monthly as submitted by a detailed statement of disbursements.

DISTRIBUTION OF PERSONNEL - FISCAL YEAR 1959-60

	Administrative H.Q., Calgary, Alberta	Crownsnest Forest H.Q., Blairmore, Alberta	Bow River Forest H.Q., Calgary, Alberta	Clearwater Forest H.Q., Rocky Mountain House, Alberta	Totals
<u>PERMANENT STAFF</u>					
Secretary of the Board	1	-	-	-	1
Chief Forester	1	-	-	-	1
Administrative Officer	1	-	-	-	1
Forest Superintendents	-	1	1	1	3
Assistant Superintendents	-	1	1	1	3
Protection Planning Officer	1 *	-	-	-	1
Foresters	2	-	-	-	3
Headquarters' Rangers	-	1	1	1	3
District Rangers	-	6	6	5	17
Assistant Rangers	-	4	11	6	21
Chief Clerk	1	-	-	-	1
Clerks - Stenographers	4	2	3	3	12
Draftsman	1	-	-	-	1
Technical Officer	1	-	-	-	1
Maintenance Foreman;-Buildings	1	-	-	-	1
" " Mechanical	1	-	-	-	1
" " Roads	1	-	-	-	1
Tractor-Grader Operator Mechanics	2	1	1	1	5
Garage Mechanic	1	-	-	-	1
Maintenance Man;-Signs	-	1	-	-	1
Warehouseman	1	-	-	-	1
Truck Driver	1	-	-	-	1
Lookoutmen (Permanent)	-	1	1	1	3
Total	21	18	25	20	84
<u>SEASONAL STAFF</u>					
Lookoutmen	-	4	6	4	14
Suppression Crews, Road Crews, Student Assistants	16	6	6	6	34
Total Personnel	37	28	37	30	132

* Incumbent resigned November 30th, 1959. Position Vacant.

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CANADA DEPARTMENT OF AGRICULTURE
RESEARCH BRANCH
Forest Biology Laboratory
Calgary, Alberta.

Report on Insect Conditions in the Eastern Rockies Forest Conservation
Area 1959-60

The Bruce spanworm and several species of leaf rollers were responsible for a great deal of defoliation along the eastern slopes of the Rocky Mountains and aspen leaf miner was common in the western part of the Conservation Area. Except for a small bark beetle outbreak in the Porcupine Hills insects did little damage to coniferous trees in 1959.

The important insects were as follows:

Douglas-fir bark beetle, Dendroctonus pseudotsugae (Hopk.) - A small outbreak of the Douglas-fir bark beetle, D. pseudotsugae, was reported from the Porcupine Hills in the summer of 1959. The outbreak occurred in a small stand of mature Douglas-fir adjacent to a logged-over area. In the fall of 1959 Forest Biology Rangers conducted an 11.5 per cent strip cruise of the area. Using the information on volumes obtained by the Alberta Forest Service it was calculated that the volume of timber destroyed by the bark beetles was 124,500 f.b.m. or 10 per cent of the total volume in the stand. Ninety-four per cent of these trees had been attacked within the last three years.

Larch sawfly, Pristiphora erichsonnii (Htg.) - West of Highway No. 2 heavy defoliation was reported between Sundre and Alder Flats.

The infestation on the Kananaskis Forest Experiment Station was reduced in 1959 and only light damage was observed.

Spruce budworm, Choristoneura fumiferana (Clem.) - The 2-year cycle spruce budworm in the National Parks were first-year larvae in 1959 and caused little damage. Moderate defoliation of the new growth can be expected in some areas of Yoho National Park, in 1960.

Leaf rollers on aspen - The complex of species responsible for the leaf roller damage in 1958 remained active in 1959. Of this complex approximately 92 per cent of the larvae collected were Pseudexentera improbana oregonana (Wlshm.); 6 per cent were Choristoneura conflictana (Wlk.); and 2 per cent Compsiolechia niveopulvella (Chamb.). P. improbana oregonana remained the most injurious leaf roller, C. conflictana was slightly more numerous than last year and C. niveopulvella was no longer an important insect.

As in 1958 leaf rollers could be found in almost every aspen stand in the Province.

Bruce spanworm, Operophtera bruceata (Hulst.) - Larvae of this insect caused considerable defoliation of aspen trees along the foothills from the Porcupine Hills to Rocky Mountain House and east through the aspen grove region to the Saskatchewan border. There was a decrease in numbers of this insect south of the Bow River valley and a corresponding increase north of the valley. A westward shift of populations was also evident in this area.

Yellow-headed spruce sawfly, Pikonema alaskensis (Roh.) - A small infestation which has persisted near the Gap Ranger Station in the Livingstone Forest Reserve was not visited in 1959.

Spruce spider mite, Oligonychus ununguis (Jac.) - Spruce spider mite did little damage in 1959. Mites were observed on many native spruce in the Rocky Mountain House district and on the Kananaskis Forest Experiment Station.

Pine needle scale, Phenacaspis pinifoliae (Fitch) - The infestation along the York Creek Road south of Coleman has subsided; a light infestation remained in 1959. No other infestations were reported.

Leaf eating beetles, Phytodecta americana (Schffr.) - Galerucella decora (Say), Galerucella carbo Lec., Dichelonyx backi Kby., Altica populi Brown and Altica plicipennis Mann. - Leaf eating beetles were present throughout the region in 1959 but did little damage. The American aspen beetle, P. americana, was found throughout the south and central parts of the Province. Light infestations were reported from Waterton Lakes National Park, the Porcupine Hills the Cypress Hills and in the Clearwater Forest.

Black-headed budworm, Acleris variana (Fern.) - The black-headed budworm caused little damage in 1959.

CANADA DEPARTMENT OF AGRICULTURE
RESEARCH BRANCH
Forest Biology Laboratory
Calgary, Alberta

Report on Forest Diseases in the Eastern Rockies Forest Conservation Area
1959-60

Surveys and research on forest diseases were continued in the Conservation Area during the year by personnel assigned from the Forest Biology Laboratory (Canada) at Calgary. No significant change for the worse in the general disease conditions of the area was noted during the year. Because of this an opportunity was afforded to add to the knowledge of diseases reported on heretofore, in terms of their capabilities to cause forest losses.

Survey Operations. Two forest biology rangers provided information on the general level of diseases in the three forests. Climatic injury, in the form of late frosts and resulting in the condition known as "clumping of aspen foliage", was common in all foothills forests. This is a chronic condition in aspen stands that habitually leaf out early in the year, and involves the killing of all or most of the leaf buds in severe years. Foliage development on affected trees finally results from adventitious growth, near the ends of branches. The climatic injury known as "red belt" or "winter drying" was less severe than in previous years.

Infectious diseases were not alarming in 1959, except in very local areas. The worst of these was the spruce cone rust disease which was widespread in foothills forests. This disease causes the destruction of seeds within maturing cones, mainly of white and Engelmann spruce.

Special surveys were made to locate new areas of extensive infections of the Atropellis stem canker disease, dwarf mistletoe and red heartwood stain. All of these diseases affect mainly lodgepole pine. Their purpose was to locate suitable areas for detailed studies of the organisms causing the disease in question. Extensive infections were noted as the result of these surveys as follows: Atropellis disease, near Nordegg and Jumping Pound; dwarf mistletoe, north of Coleman and near Jumping Pound; red stain, generally in foothills and subalpine forests, becoming increasingly important in 100-year old stands.

Research Operations. Research was done at various localities during the year on both the Atropellis and red stain problems. The object of the research done is to come up with specific recommendations on control of these diseases, within economic limits. The research involved requires a thorough investigation of the distributions and damage capabilities of both diseases, and will therefore be of several years' duration.

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Estimates - Fiscal Year 1960-61

Eastern Rockies Forest Conservation

	Estimates for the Fiscal Year 1960-61	Estimates for the Fiscal Year 1959-60	Increase or Decrease *
(a) <u>Salaries:</u>			
Superintendents (3)	\$ 20,245.00	\$ 20,520.00	\$ 275.00 *
Forestry Officers (part) (64)	230,265.00	224,580.00	5,685.00
Clerks and Stenographers (14)	48,375.00	49,800.00	1,425.00 *
Miscellaneous Staff	59,100.00	49,985.00	9,115.00
Extra Assistance	12,325.00	8,005.00	4,320.00
	<u>\$ 370,310.00</u>	<u>\$ 352,890.00</u>	<u>\$ 17,420.00</u>
(b) <u>Expenses:</u>			
Advertising	\$ 1,000.00	\$ 2,000.00	\$ 1,000.00 *
Automobiles	50,000.00	51,960.00	1,960.00 *
Automobile Expense	42,200.00	37,230.00	4,970.00
Clothing	7,225.00	4,400.00	2,825.00
Construction	23,440.00	15,200.00	8,240.00
Equipment	92,000.00	84,515.00	7,485.00
Food	11,450.00	7,800.00	3,650.00
Heat, Light and Power	13,430.00	5,400.00	8,030.00
Materials	43,000.00	53,050.00	10,050.00 *
Printing, Stationery and Office Supplies	3,850.00	1,300.00	2,550.00
Rates, Rentals and Insurance	35,410.00	26,030.00	9,380.00
Repairs and Replacements	23,000.00	18,720.00	4,280.00
Telegrams, Telephones and Postage	2,425.00	2,440.00	15.00 *
Travelling Expenses	23,550.00	22,000.00	1,550.00
Wages	103,000.00	92,520.00	10,480.00
General	4,620.00	3,285.00	1,335.00
	<u>\$ 479,600.00</u>	<u>\$ 427,850.00</u>	<u>\$ 51,750.00</u>
Total Appropriation No. 1906	<u>\$ 849,910.00</u>	<u>\$ 780,740.00</u>	<u>\$ 69,170.00</u>

GOVERNMENT OF THE PROVINCE OF ALBERTA
OFFICE OF THE PROVINCIAL AUDITOR

EDMONTON.

July 11, 1960

Eastern Rockies Forest Conservation Board
Calgary, Alberta

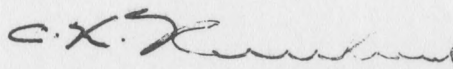
I have audited the books and records of the Eastern Rockies Forest Conservation Board maintained by the Department of Lands and Forests, Government of the Province of Alberta, for the year ended March 31, 1960 and submit the following statements herewith:

StatementParticulars

- | | |
|----|--|
| A. | Balance Sheet |
| B. | Statement of Maintenance Expenditure |
| C. | Statement of Government of Canada and
Government of Province of Alberta
Equity |

Total capital expenditures from inception to March 31, 1955 amounting to \$6,278,906.10 were made from funds provided by the Government of Canada (as authorized under Section 8 (a) of the Memorandum of Agreement), for the location and construction of forest improvements, the making of a forest inventory, reforestation, and such other works and services as the Board considered necessary in that area of the East Slope of the Rocky Mountains forming part of the watershed of the Saskatchewan River, as more definitely described in the Appendix to the Act. The total expenditure was not to exceed \$6,300,000.00 during the seven years ended March 31, 1955.

I certify that, in my opinion, the attached Balance Sheet is properly drawn up so as to show the true financial position of the Eastern Rockies Forest Conservation Board as at March 31, 1960 according to the information and explanations given to me and as shown by the records of the Board and the accompanying statements correctly set forth the result of transactions for the year ended at that date.


F. C. A.
Provincial Auditor.

EASTERN ROCKIES FOREST CONSERVATION BOARD

BALANCE SHEET AS AT MARCH 31, 1960

ASSETS

Workmen's Compensation Board deposit	\$ 5,139.79
Value of loose tools and equipment transferred to the Province of Alberta as at April 1, 1959	173,496.38
Capital improvements and works	5,716,615.20
	<hr/>
	\$ 5,895,251.37
	<hr/> <hr/>

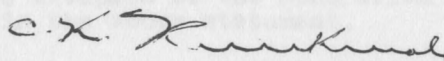
LIABILITIES

Government of Canada and Government of the Province of Alberta, equity as per Statement C	\$ 5,895,251.37
	<hr/> <hr/>

Note: Section 20 of the Memorandum of Agreement set forth in the Schedules to Chapter 59, Statutes of Canada, 1947 and Chapter 20, Statutes of Alberta, 1948 and Amendment Acts, 1957 provides that upon termination of the Agreement:

- (a) All improvements or works resulting from the carrying out of the programmes of the Board shall belong to the Province.
- (b) All other property acquired by the Board shall belong to the Province.

This is the Balance Sheet referred to in my report of July 11, 1960, addressed to the Eastern Rockies Forest Conservation Board.

 F. C. A.
Provincial Auditor.

EASTERN ROCKIES FOREST CONSERVATION BOARDSTATEMENT OF MAINTENANCE EXPENDITUREFOR THE YEAR ENDED MARCH 31. 1960

Maintenance expenses:

Salaries	\$ 349,982.93	
Wages	79,361.62	
New construction	61,326.23	
Motor vehicle expense	46,828.32	
Materials	25,031.42	
Rentals	18,949.05	
Repairs and replacements (other than motor vehicles)	18,062.46	
Travelling	17,553.00	
Camp supplies	8,191.18	
Uniforms	5,394.61	
Heat, light and power	4,207.17	
Freight, express and cartage	2,854.17	
Postage	1,183.92	
Telegrams and telephones	1,152.06	
Honorarium	1,000.00	
Printing, stationery and office supplies	985.48	
Miscellaneous supplies and expenses	<u>4,243.96</u>	
		\$ 646,307.58

Movable equipment, loose tools and small equipment:

Tractors, trailers and heavy equipment	\$ 65,521.98	
Cars and trucks	47,089.01	
Office furniture and equipment	1,624.52	
Miscellaneous equipment	<u>8,678.08</u>	
		<u>122,913.59</u>

\$ 769,221.17

Provided by:

Appropriation 1906 \$ 769,221.17

Note: The total amount expended by the Board was provided by the Government of the Province of Alberta in accordance with Section 2 (a) (ii) of the Memorandum of Agreement, dated June 17, 1953, between the Government of Canada and the Government of the Province of Alberta as set forth in the Schedules to Chapter 41, Statutes of Canada, 1952 and Chapter 36, Statutes of Alberta, 1953.

The remuneration and expenses of members of the Board were paid by the Governments of Canada and the Province of Alberta in accordance with Section 2 (b) (iii) of the Memorandum of Agreement and are not, with the exception of the honorarium of \$1,000.00 to A. T. Baker, included in the above statement.

EASTERN ROCKIES FOREST CONSERVATION BOARD
STATEMENT OF GOVERNMENT OF CANADA AND GOVERNMENT
OF PROVINCE OF ALBERTA EQUITY
FOR THE YEAR ENDED MARCH 31, 1960

Balance as at April 1, 1959	\$ 5,895,197.84
Add:	
Workmen's Compensation Board deposit interest	<u>139.79</u>
	\$ 5,895,337.63
Deduct:	
Workmen's Compensation Board interest remitted	<u>86.26</u>
Government of Canada and Government of Province of Alberta equity as at March 31, 1960	\$ 5,895,251.37

CIRC NO 19 '78

Date Due

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CONSERVATION BOARD

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